ATTACHMENT 1

PROJECT DESCRIPTION
AT&T Asia America Gateway Project

1.0 PROJECT DESCRIPTION

The proposed California portion of the project consists of installing one fiber optic cable with self-contained power on the continental shelf landing at AT&T's existing landing facility in the Montana De Oro Sand Spit Parking Lot near Morro Bay, California. The cable would be connected to the AT&T 03 cable station in San Luis Obispo. The marine cable would be installed using a combination of plowing and direct bottom lay along a predetermined course to destinations in Hawaii, Guam and Asia. See Figure 1 for destination routes to Asia.

Figure 1

1.1 Project Objectives

The Asia America Gateway (AAG) cable system would be the first direct terabit (one trillion bits) submarine cable network between Southeast Asia and the United States. Spanning over 20,000 km, AAG would link Malaysia to the U.S. via Singapore, Thailand, Brunei, Vietnam, Hong Kong, the Philippines, Guam, Hawaii and the West coast of the U.S. The proposed facility is needed to meet the forecasted growth in bandwidth requirements for new broadband applications such as IP, video, data, and other multimedia services. In addition to providing full network diversity from the conventional cable routes, which are normally connected via North Asia, the AAG would provide a seamless direct link between the U.S. and other Asian countries via one single cable. International communications between the countries involved has been growing rapidly, and is expected to benefit from the enhanced connectivity offered by the new cable network. It would enhance network reliability by providing an alternate connection around the "ring of fire". It would offer "seamless interconnection" for those locations identified above with Europe, Africa and Australia.

1.2 Project Segments

The exact marine cable route would be selected after a seabed survey using high-resolution side scan sonar, magnetometers, sub-bottom profilers, sediment core sampling and other types of geophysical data is collected along the design route. This would allow finalization of a cable route that would maximize cable burial by avoiding rock outcrops and other obstructions where practicable, including avoidance of any possible shipwrecks or other known cultural resources. These detailed geophysical surveys of the ocean floor were scheduled to commence during the summer of 2007.

The proposed project can be more easily understood by dividing it into three segments.

1.2.1 Terrestrial Segment

The terrestrial segment consists of a cable station and a terrestrial fiber optic cable that connects the cable station to the beach manhole described in the shore end segment. The Cable Station is located approximately 10.5 miles (16.9 km) inland from the landing site on Clark Valley Road west of San Luis Obispo, California. This facility consists of an existing building that was constructed in the 1960's.

The cable station would be connected to the marine fiber optic cable by a land cable, which could be a single terrestrial fiber optic cable and a single power cable or a single cable containing both power and fiber connectivity. The land cable would be placed in an existing conduit and manhole system, referred to as the "ridge system". Once this conduit system exits the Montana de Oro State Park, this ridge system is located entirely within private easements except where it crosses Pecho Valley Road and Clark's Gap Road. This conduit system was constructed in 1990.

1.2.2 Shore End Segment

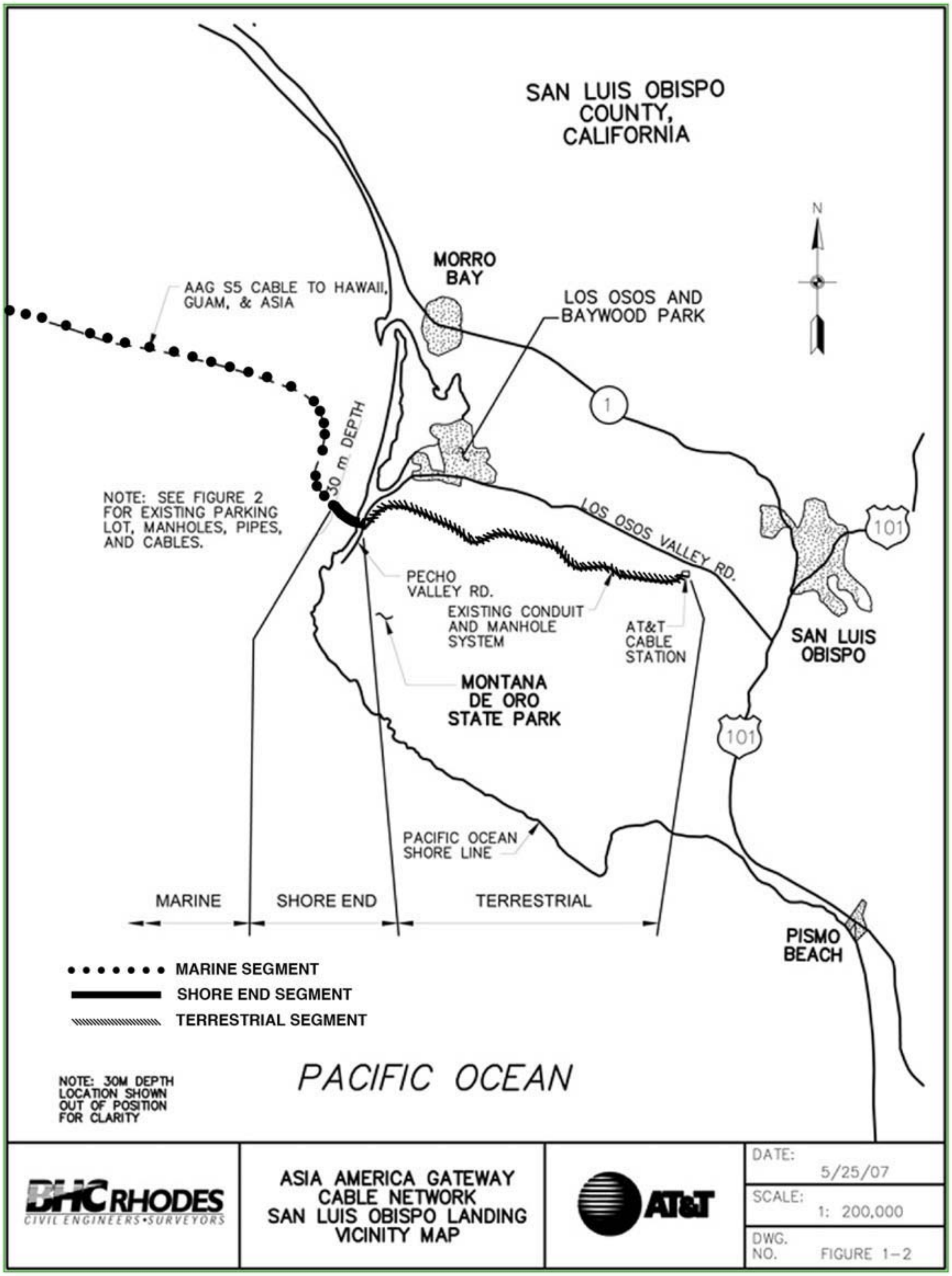
The shore end segment refers to those installation activities that take place from the beach manhole seaward to the point where the water depth reaches 98 feet. These installation activities would take place at the end of the one existing "spare" bore pipe that was placed by MFS Globenet, Inc. in 2001. On the land end, the cable would be back pulled into the existing "beach manhole" that was also installed in 2001. The existing seaward pipe is a 5-inch drill pipe that is identical to the other eight pipes that hold existing cables. Construction activities associated with this segment of the project consist of cable pulling only. No new facilities would be constructed.

1.2.3 Marine Segment

The marine segment is that portion of the project that lies westerly of the point where the water depth reaches 98 feet (30 meters). The marine operations would consist of burying the marine fiber optic cable beneath the ocean floor along its predetermined course. The current proposal is to bury the cables in the soft-bottom substrate to a depth of 3.3 feet (1.0 meter), where feasible, all the way out to the 1,000 fathom (6,000 feet, or 1,800 meters) water depth mark. From that point, the cables would be laid directly on the sea floor toward their destinations in Hawaii, Guam and Asia.

An overview of the proposed project segments, in the California portions of the project is shown in Figure 2.

Figure 2


SAN LUIS OBISPO COUNTY, CALIFORNIA
N
MORRO BAY
LOS OSOS AND BAYWOOD PARK
AAG S5 CABLE TO HAWAII, GUAM, & ASIA
30 m DEPTH
1
NOTE: SEE FIGURE 2 FOR EXISTING PARKING LOT, MANHOLES, PIPES, AND CABLES.
LOS OSOS VALLEY RD.
101
PECHO VALLEY RD.
EXISTING CONDUIT AND MANHOLE SYSTEM
AT&T CABLE STATION
SAN LUIS OBISPO
MONTANA DE ORO STATE PARK
101
PACIFIC OCEAN SHORE LINE
MARINE
SHORE END
TERRESTRIAL
PISMO BEACH
MARINE SEGMENT
SHORE END SEGMENT
TERRESTRIAL SEGMENT
PACIFIC OCEAN
NOTE: 30M DEPTH LOCATION SHOWN OUT OF POSITION FOR CLARITY
BHC RHODES
CIVIL ENGINEERS • SURVEYORS
ASIA AMERICA GATEWAY CABLE NETWORK SAN LUIS OBISPO LANDING VICINITY MAP
AT&T
DATE: 5/25/07
SCALE: 1: 200,000
DWG. NO. FIGURE 1-2

1.3 CABLE DESIGN CRITERIA

1.3.1 System Ring Configuration

The AAG System is designed as a point-to-point system that, once installed, would become part of the global network of cables. In this global network, each cable can rely upon others to temporarily carry traffic in the event of a cable incident. For standard protection, each cable must be separated from the other by as much distance as practical. Separation reduces the likelihood that two cables would be severed by the same event (such as a construction project, ship anchor, landslide, etc.). For similar reasons, the terrestrial cable is separated from other cables in the conduit system. Therefore, both the terrestrial cable and the marine cable are designed to have separation from other existing cables.

Marine Cable Design

Several different marine cable designs would be utilized to provide an appropriate degree of protection for the cable from geologic and sedimentary conditions encountered during installation, and from potential interactions with fishing gear. However, the fundamental design of all these cables is similar. They rely on rings of wires, copper sheathing, and polyethylene insulation surrounding an inner core of optical fibers. The greatest degree of protection is provided by the “double-armored” (DA) design, which can be used in relatively shallow areas of rocky or coarse-substrate and where protection from external threats (e.g., fishing gear or anchors) is warranted (out to 656 feet, or 200 meter water depth). The double-armored cable includes two surrounding layers of galvanized wires, two layers of polypropylene sheathing, and an outer layer of asphalt based protective coating.

The next level of protection is provided by the “single-armored” (SA) design, which is used in areas of rocky or coarse-substrate in water depths greater than 656 feet (200 meters) where there is a lesser need for protection from external threats. The single-armored cable includes one surrounding layer of heavy galvanized wires, two layers of polypropylene sheathing and an outer layer of asphalt based protective coating.

The third design is a “light-weight-armored” (LWA) cable, similar in design to the single armored cable but with a single surrounding polypropylene sheath and ring of lighter galvanized wires. The light-weight-armored cable is used where the risk of damage due to substrate conditions or external threats is reduced by the burial of the cable in soft-bottom sediments using a sea plow or Remote Operated Vehicle (ROV).

The other cable types to be used on this project are “light weight” (LW) and “light weight protected” (LWP)”. These cable types are designed for deeper water where external threats no longer exist.

Minimum Distance Between Marine Cables

AT&T would use the industry standard “2 times the water depth” or, 164 feet (50 meters) minimum separation, in parallel sections (with existing cables) that are laid in deep water (beyond depths at which cables can be recovered by divers) in order to provide system security and an adequate margin for repair operations if required.

A minimum separation of twice the water depth is necessary and adequate to ensure that cable repair operations do not run the risk of violating international and federal law for showing “due regard” for cables belonging to others. In particular, the United Nations Convention on Law of the Sea (UNCLOS) Article 79 (Submarine Cables and Pipelines on the Continental Shelf) stipulates that: “When laying submarine cables or pipelines, states shall have due regard to cables or pipelines already in position. In particular, possibilities of repairing existing cables or pipelines shall not be prejudiced.” In addition, UNCLOS Article 114 and the U.S. Submarine Cable Act (U.S. Code [USC] Title 47, Chapter 2) impose liability on cable companies that damage other cables in repair operations.

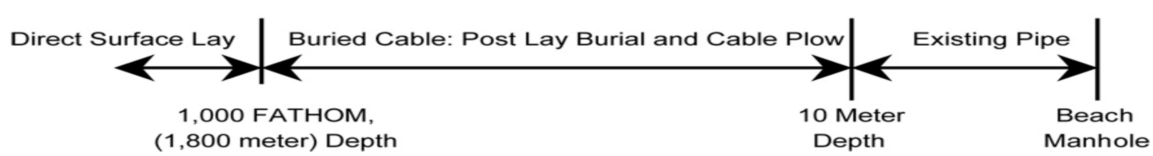
Marine Routes

The exact marine cable route would be selected after a seabed survey using high-resolution side scan sonar, magnetometers, sub-bottom profilers, sediment core sampling and other types of geophysical data is collected along the design route. This would allow finalization of a cable route that would maximize cable burial by avoiding rock outcrops and other obstructions where practicable, including avoidance of any possible shipwrecks or other known cultural resources. These detailed geophysical surveys of the ocean floor are scheduled to commence during the summer of 2007. The results will be included as part of the EIR.

Marine Cable Burial Depths and Methods

Burial would be accomplished by a combination of Sea Plow, ROV, and diver jet burial as illustrated in the sketch below which shows approximately where each technique would be used.

Figure 3



Cable Regeneration

The AAG system is designed to allow light pulses to be transmitted approximately 47 miles (76 kilometers) along the fiber optic cable before the need to be regenerated. This regeneration is accomplished by regenerator equipment attached to the cable at the appropriate intervals. The regeneration equipment operates off of direct current (DC) electricity.

The fiber optic cable to be installed for the marine portion of the project contains a copper conductor to transmit the DC electrical power to the regenerators. Because it is DC electricity, there is no potential electrocution hazard to humans or animals. The direct current does generate a mild magnetic field that is on the order of 5 milligauss at a distance of 3.3 feet (1 meter) from the cable. This field is roughly one percent as strong as the earth’s magnetic field. The field diminishes rapidly with distance from the cable such that at 33 feet (10 meters) it would be approximately 0.5 milligauss (roughly one tenth of one percent of the earth’s magnetic field).

1.3.2 Terrestrial Cable Design

The land cable would be installed within the existing ridge conduit system between the beach manhole and the AT&T 03 cable station. Design considerations at this time include a single fiber optic cable and a single power cable or a single cable containing both fiber and power connectivity. The fiber portion would be used to transmit voice, data and video communications throughout the system while the power portion (an insulated copper power cable) would carry the required power for the system from the cable station to the marine cable (spliced in the beach manhole). The fiber-only cable is approximately ½ inch in diameter and is non-armored while the power-only cable is approximately ¾" in diameter and is also non-armored. The combined fiber/power cable is also approximately ¾" in diameter and is non-armored. Grounding would be accomplished through a new ground bed that would be installed specifically for the AAG system. Locations being considered at this time include the cable station (on AT&T owned private property), within the existing easement inside the Montana De Oro State Park, and in a private easement (either existing or new) just outside the Montana De Oro State Park.

Minimum Distance Between Terrestrial Cables

Since the AAG system is a point-to-point system, there is only one terrestrial cable between the beach manhole and the cable station. Terrestrial route diversity is nonetheless achieved because as with the marine cables, the AAG system can take advantage of other existing cable systems for terrestrial diversity, should it be necessary. For example, even though the AAG fiber optic cable would be installed in the existing ridge conduit system, there is also a "valley" fiber optic cable system along Pecho Valley Road into which the AAG traffic can be routed in the event that the ridge system route is temporarily compromised.

Terrestrial OSP Conduit Route

The terrestrial cable route consists of an existing conduit and manhole system (constructed in 1990) that extends from the beach manhole at the Sand Spit parking lot easterly along the ridge line of hills located south of Clark Valley Road to the AT&T 03 cable station; a distance of approximately 10.5 miles (16.9 kilometers). Once this conduit system exits the Montana de Oro State Park, this ridge system is located entirely within private easements except where it crosses Pecho Valley Road and Clark's Gap Road.

1.4 CONSTRUCTION COMPONENTS

The project, though one basic operation, is divided into three distinct segments of work. These segments include terrestrial, shore-end and marine. Each of these segments is described in this section. In addition, related, supporting topics are also discussed.

1.4.1 Terrestrial Operations

Terrestrial operations refer to those operations that would take place between the "beach manhole" and the cable station. The conduit system (including the beach manhole) is existing. The only construction operation necessary for terrestrial portion of the project is cable placing and splicing as described below.

Cable Placing and Splicing
Access to the manholes would be through the cable right-of-way and existing public and private roads. Due to the remoteness of a few of the manholes, it may be necessary to do some minor road grading on existing roads.

Any disturbed surfaces would be reseeded in accordance with Montana De Oro State Park requirements or the County of San Luis Obispo, depending on the location.

Ocean Ground Bed
The ground bed would be constructed by first placing four or five anodes in vertical excavations. The anodes would then be connected to the cable station in the existing conduit where it would be connected to the various transmission components. No ocean installations are necessary for system grounding.

Operation and Maintenance
Operation and maintenance activities associated with a fiber-optic cable project are minimal. AT&T would operate and maintain the facility in the future. The maintenance personnel would identify areas where problems have occurred and take actions to correct them.

1.4.2 Shore-End Operations

Shore-end operations are those construction and cable installation activities that take place between the cable landing locations on shore and the end of typical diver-assisted operations off shore. Specifically, the shore-end operations begin at the “beach manhole” and end at the location along the marine cable alignment where the water depth reaches 98 feet (30 meters). These operations include both terrestrial and marine work and provide the interface between the marine operations and the terrestrial operations.

The shore-end operations consist of preparing the end of the existing bore pipe, pulling the marine cable through the existing bore pipe, anchoring the cable inside the beach manhole, splicing the marine cable to the terrestrial cables and performing post-lay burial of the marine cable in the ocean

Bore Pipe Exposure, Cleaning and Preparation
The shore-end contractor would excavate a trench in the beach parking lot to expose the end of the bore pipe (located about 20 feet, or six meters, from the beach manhole). After both ends of the bore pipe are exposed and prepared, the cleaning and testing of the pipe would begin.

A primary work boat, which would serve as a dive platform, would be deployed to the area of the end of the pipe where it would set up station within about 50 feet (15 meters) off the end of the pipe. This boat would be a 100- to 200-foot (30- to 60-meter) construction work boat. This boat would be accompanied by a smaller, secondary work boat, which would set and retrieve anchors as well as shuttle crew between the work boat and Morro Bay. All anchors would be set and retrieved vertically to avoid dragging them across the sea floor.

The contractor would send divers down who would use jets to excavate around the end of the pipe to expose it for preparation. Once the end of the pipe is exposed, a buoy would be attached to mark its location.

If the process of pumping the air through the pipe has not sufficiently removed any debris left in the pipe (either from initial installation or from valve intrusions as it laid buried) the pipe would be flushed with potable water to achieve cleaning. After the pipe has been flushed, a 0.75 inch (19 mm) wire rope would be installed into the bore pipe for the cable pulling operation. The pipe preparation work would take approximately three to five days.

Cable Pulling and Splicing

Cable pulling into the bore pipes would be accomplished from behind the existing beach manhole (but still entirely within the footprint of the paved parking lot). A 10 ton (9,100 kilogram) winch anchored to a temporary dead man (a D5 Caterpillar tractor) facilitates the pulling. Divers would then install cable chutes and floats to the end of the pipe and cables, respectively, in preparation of pulling. The end of the cable would then be attached to the 0.75 inch (19 mm) wire rope which was placed during the last cleaning step and attached to the winch. Once on shore, holding clamps and cables would be attached to temporarily hold the cable firmly until the C-End can be removed from the winch and removed. The end of the marine cable is then placed into the beach manhole and permanently secured with a cable stopper. This operation is completed within one day. No lubricants would be used during the cleaning, testing or cable pulling processes.

The final step is to splice the marine cable to the terrestrial fiber and power cables. Once this is completed, split steel pipe is placed over the exposed cable from the outside wall of the manhole to the end of the pipe and the trench is then backfilled and compacted. Once all equipment is demobilized, the surface would be restored to its original condition.

Support equipment for this operation would include a winch, D8 Caterpillar, backhoe, compressor, pick-up truck(s) and possibly a small mobile crane. The parking lot would remain open for most of the work with barrier fencing used to protect the public during landing preparations. On landing day, the parking lot would need to be closed for public safety. The parking lot closure would be coordinated with local park management personnel. All activities at the beach parking lot would take one to two weeks to complete.

Retro Burial

Once the cable has been securely anchored at the beach manhole, the cable ship is given the order to begin moving out along the predetermined course, paying out the marine cable as it goes. The ship would move away at a rate of approximately 0.4 knots. Once it is a safe distance away from the end of the pipe, divers would descend to begin retro burial operations.

Retro burial would occur, using one of several methods, between the end of pipe at a water depth of approximately 33 feet, or 10 meters to a water depth of 98 feet, or 30 meters (approximately 1.3 kilometers, or 0.8 miles off shore). These methods include divers using hand jets to open a narrow trench beneath the cable as well as a “cable touch down follow operation”, wherein, a second vessel, with a small ROV follows the main lay and performs the retro burial remotely.

1.4.3 MARINE OPERATIONS

Marine operations refer to those activities that would take place seaward of the point where the water depth is 98 feet (30 meters). They include a pre-lay grapnel run, cable laying, cable plowing and ROV post-lay burial.

Pre-Lay Grapnel Run

The purpose of a pre-lay grapnel run is to clear debris, such as discarded fishing gear, from the seafloor along the corridors where the cables would be buried. Any debris recovered during the operation is stowed on the vessel for subsequent disposal in port.

Cable Plowing

Cable plowing can be used on the Marine cable between the water depths of 328 feet (100 meters) and 1,000 fathoms (6,000 feet, or 1,800 meters). The cable ship would deploy the burial tool after completing the shore end landing operations. The plow is towed by the cable ship and would mechanically bury the cable. The plow slices through the ocean floor and feeds the cable into the furrow as one operation.

Post-lay burial using Remote Operated Vehicle (ROV)

Where the plow burial tool cannot achieve targeted burial depth due to bottom conditions, a remote operated vehicle (ROV) would be used between water depths of approximately 98 feet (30 meters) and 1,000 fathoms (6,000 feet, or 1,800 meters). These sections of cable would be temporarily laid on the ocean floor by the cable ship awaiting post-lay burial at a later date by the ROV. In a similar manner to the hand jets, ROV jets would loosen the sea floor sediments beneath the cable, allowing it to settle to the desired depth. The disturbed sediments then settle back over the area to their original grade leaving the cable buried. The target burial depth would be 3.3 feet (1.0 meter), where feasible. This would take place between one day and three weeks of when the cable is first laid on the ocean floor.

Debris Management

All cable installation procedures are designed to minimize the possibility of introducing debris into the water. All debris produced on board the vessels would be handled in accordance with international and national regulations. Small amounts of waste may be generated by the project.

Offshore vessels are equipped to manage, collect and properly dispose of waste products. Likewise, any waste generated during the shore-end activities would be collected and properly disposed.

Vessel Specifications

The actual vessels that would be performing the work are not known at this time. A summary of the vessel types and typical duties is described below.

Main Cable Ship: The main cable ship would lay the cables from the shore off the continental shelf and across the ocean. The main cable ship or one like it, would also operate the ROV for the post-lay burial operation. Possible main cable ships include *CS ASN ILE DE SIEN or CS ASN ILE DE BATZ* or similar vessels.

Primary Work Boat/Ship of Opportunity: The primary workboat would serve as a dive and construction platform for the landing support and diver post-lay burial.

Secondary Workboat: The secondary work boat would assist the primary work boat by setting and retrieving anchors and shuttling personnel and equipment between the primary work boat and port.

Utility Crossings

If existing utilities are crossed, the crossing method would be to raise the sea plow and recover it to the deck then lay the cable directly on the ocean floor where the existing cable is crossed. This method is an industry standard when crossing existing facilities and would be used where other utilities are crossed. Additionally, the crossing would be made as close to a perpendicular angle to the existing cable as practicable.

1.4.4 Duration Of Activities

The terrestrial and shore-end activities would be conducted during daylight hours seven days per week (or less if restricted by the Montana De Oro State Park) from when they are begun. Near-shore and offshore activities would be conducted 24 hours per day from the date when they are begun. The general time frames of specific tasks are as follows.

1.5 CABLE OPERATIONS, MAINTENANCE, REPAIR AND RETIREMENT

1.5.1 Cable Identification

Highly precise differential geographic positioning system (DGPS) navigation is used during the installation of these cables. Extensive records are maintained that track the exact location of the cable lay ship, seabed plows or ROVs during the installation process. After installation, these data are compiled into a standard format cable record. This record is distributed to all cable maintenance zone ships, government charting agencies, and other data users. Records can then be used to locate the cables on the seabed when a cable repair is needed. These records are maintained throughout the system life and after the system has been retired.

1.5.2 Cable Operations and Maintenance

Other than ensuring that the power feed and transmission equipment in the terminal station are in proper working order, no routine maintenance is planned for the submerged portion of the cable network. The cable is typically warranted for 25 years. Due to the stability of the ocean bottom environment, regular maintenance is unnecessary.

1.5.3 Retirement of the Cable

The cable is expected to operate for a minimum of 25 years. It is unknown exactly how long the cables would be in use. Options upon retirement include donation to a research entity, sale to another owner operator, retirement in place, or removal and salvage. In addition, the EIR will address retirement of the cable should AT&T abandon the cable prior to expiration of the lease.

2.0 PERMITS AND PERMITTING AGENCIES

In addition to action by the CSLC, as the CEQA lead agency, the proposed Project may require permits and approvals from reviewing authorities and regulatory agencies that may have oversight over aspects of the proposed project, including but not limited to:

- U.S. Army Corps of Engineers (Corps)
- National Marine Fisheries Service (NMFS)
- U.S. Fish and Wildlife Service (USFWS)
- Regional Water Quality Control Board (RWQCB) Central Coast Region
- California Department of Fish and Game (CDFG)
- California Coastal Commission
- California Department of Parks and Recreation
- San Luis Obispo County Air Pollution Control District
- County of San Luis Obispo

3.0 ALTERNATIVES

In accordance with Section 15126.6 of the CEQA, an EIR must "describe a range of reasonable alternatives to the Project, or to the location of the Project, which would feasibly attain most of the basic objectives of the Project, but would avoid or substantially lessen any of the significant effects of the Project, and evaluate the comparative merits of the alternatives." The State CEQA Guidelines also require that a No Project Alternative be evaluated, and that under specific circumstances, an environmentally superior alternative be designated from among the remaining alternatives.

3.1 Alternatives Proposed For Consideration

As required under the CEQA, the EIR would include a discussion of the proposed Project and the No Project Alternative. Under the No Project Alternative, attainment of project objectives to improve telecommunication access to countries in the Pacific Rim would not be met. Additional alternatives will be developed based on information received during the public scoping process and as a result of the environmental analysis.

4.0 SCOPE OF EIR

Pursuant to State CEQA Guidelines section 15060, the CSLC staff conducted a preliminary review of the proposed Project. Based on the potential for significant impacts resulting from the proposed Project, an EIR was deemed necessary. A preliminary listing of issues to be discussed in the EIR is provided below. Additional issues may be identified at the public scoping meeting and in written comments.

5.0 POTENTIAL ENVIRONMENTAL EFFECTS

5.1.1 Aesthetics

Views of the marine environment from the shoreline of Montaña de Oro State Park are essentially pristine except for seagoing traffic, including nighttime traffic.

Environmental impacts affecting the aesthetics of the area would be limited to the installation phase of the project. The project would result in human activity and vessel traffic in a very small area of the nearshore marine environment intermittently during the installation phase. Lighted ships would be visible at night.

5.1.2 Air Quality

The EPA has designated all areas of the United States as having air quality better than (attainment) or worse than (nonattainment) the National Ambient Air Quality Standards (NAAQS). Presently, San Luis Obispo County is in attainment of all NAAQS. The California Air Resources Board (ARB) also designates areas within the state as either in attainment or nonattainment of the California Ambient Air Quality Standards (CAAQS). Presently, San Luis Obispo County is in nonattainment of the CAAQS for ozone (O3) and particulate matter less than or equal to 10 microns in diameter (PM10) and in attainment for nitrogen dioxide (NO2), sulfur dioxide (SO2), and carbon monoxide (CO).

Activities associated with construction of the Project would generate emissions of criteria pollutants from the operation of the dive boat, support vessel, and cable laying vessel in the nearshore waters off Montaña de Oro, and from related shore-end activities at the Sandspit parking lot. Criteria air pollutants include ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter (PM_{10} and $PM_{2.5}$), and lead.

The operation of construction equipment and ships would also generate greenhouse gas emissions that are known to contribute to global warming effects. This in turn, could affect the California Air Resources Board ability to meet the mandates of AB 32 (California Global Warming Solutions Act).

Emissions from these activities would be short-term, occurring intermittently over a period of about one to two months.

The primary sources of the long term operational impacts of the proposed Project would be from maintenance of the fiber optic cables which would occur on a scheduled basis to minimize the risk of cable breaks. The second source is the generation of electricity to power the fiber optic cables.

5.1.3 Biological Resources

The region surrounding the project, including Morro Bay to the north and the rocky coastline of Point Buchon to the south, includes important habitat for seabirds, sea otters, sea lions, and cetaceans. In addition to the diverse habitats of the Morro Bay estuary and surrounding lands, specific areas of importance include nesting areas for seabirds (including black oystercatchers, pelagic cormorants, and pigeon guillemots), on the rocky coastline of Point Buchon; foraging habitat for shorebirds, including the threatened southwestern snowy plover, along Sandspit Beach inshore of the project; for sea lions, the rocky shoreline to the south, beginning in the area of Islay Point; and for sea otters, rocky areas and kelp beds to the south, also beginning at Islay Point, although sea otters are common in the nearshore areas off Sandspit Beach. Cetaceans that may be encountered in nearshore areas include harbor porpoises (during winter and spring), humpback whales (during summer and fall), and gray whales. Gray whales can occur from December to May, with greatest numbers in January during the southward migration, and a secondary peak in March during the northward migration. The whales come close to Point Buchon.

The occurrence of kelp, surf grass, or eelgrass beds is of interest as these habitats are generally considered sensitive by resource agencies because they are especially productive and provide habitat for a greater variety of fish and invertebrate species than otherwise occur in rocky or sandy areas. Neither surf grasses nor eelgrass occur in the sandy bottom habitat from the bore exit out to the rock outcrops, owing both to depth and substrate instability.

The low rock outcrops in deeper water are expected to support sparse algal growth, owing to reduced light due to depth and turbidity, although small patches of kelp may be present on rock outcrops at inshore locations. The nearest kelp beds, which probably contain both giant kelp (*Macrocystis pyrifera*) and bull kelp (*Nereocystis leutkiana*), as well as palm kelp (*Pterygophora californica*), are associated with the rocky shoreline — which continues offshore — 1.5 to 2 miles (2.4 to 3.2 km) south at Islay Point, and more extensively farther south around Point Buchon.

Pismo clams (*Tivela stultorum*) occur in shallower waters in the project area. At the shallower depths crossed by the project, sanddollar beds (*Dendraster excentricus*) may be encountered, and large concentrations of white urchins (*Lytechinus* spp.) may occur along the cable route. Infaunal organisms that would be anticipated include a variety of amphipods, burrowing gastropods and clams, both tube-dwelling and errant polychaetes, brittle stars, and sea stars. Flatfishes (sanddabs, halibut, etc.) are especially prominent in this habitat.

The low rock outcrops in deeper water are expected to support sparse algal growth, owing to reduced light. Benthic communities are expected to be dominated by encrusting or colonial invertebrates, including a variety of sponges, anemones, gorgonians, tube-dwelling polychaetes, bryozoans, tunicates, and solitary corals.

Thirteen species listed threatened and endangered and other special-status species area known to be in the general area of the proposed project. The only species likely to occur in areas affected by the project are the California brown pelican and the southern sea otter.

Activities associated with construction of the Project would disrupt the bottom communities, possibly crushing and/or dislodging small, sessile or relatively sedentary macroinvertebrates along a narrow strip. In addition, underwater noise associated with construction activities has the potential to adversely impact sea mammals, sea turtles and fish.

Human activity at the surface could temporarily disturb marine birds and mammals in the immediate vicinity both during the construction and the operation of the project due to vessel travel.

During the operational phase of the project, the cable would remain as a permanent feature on the bottom in this habitat. It could provide an additional hard substrate, which plants and invertebrates could attach to and small fishes and invertebrates could utilize for shelter or foraging.

Repair or cable removal could have impacts similar to those of cable installation

5.1.4 Commercial and Recreational Fishing

Commercial fishing in the vicinity of Morro Bay targets a variety of species ranging from invertebrates such as crab and shrimp to finfish and sharks. Gear types used to harvest these resources include trawl, gill net, trap, diving, round-haul nets, and hook-and-line. Vessels fishing in this area are primarily from Morro Bay, although some vessels from Avila and other, more distant ports (such as from the Santa Barbara area or Monterey to San Francisco area) also may fish in the area.

The primary ports in the project area that provide facilities for commercial and recreational vessels, including facilities for landing commercial catch, are Morro Bay and Port San Luis/Avila.

Trawling is of special interest because it is the fishery with the highest potential for conflict with submarine cables. Trawling occurs beyond the three nautical mile (nm) state waters limit (pursuant to section 8836 of the California Fish and Game Code), out to depths of approximately 600 fathoms (3,600 feet [1,100 m]), with some trawling reported to 800 fathoms (1,460 m). Most trawling is in soft bottom areas although low-relief rocky areas may also be trawled using roller gear.

Hook-and-line commercial fishing, particularly horizontal bottom set and vertical longline, also has the potential for conflicts with submarine cables that are not buried. Cables suspended between rocks could be hooked by the fishing gear or snagged by anchors of vessels fishing there, resulting in loss of the equipment.

The project has the potential to affect most commercial and recreational fisheries for short periods of time during installation of the cable. Fishing would be temporarily precluded only in the immediate vicinity of the cable laying vessel as it moves along the cable route at less than one knot.

The operation of the project could also affect commercial and recreational fisheries primarily from gear entanglement with the exposed portions of the cable.

5.1.5 Cultural Resources

The waters along coastal California have a potential to contain intact prehistoric sites as well as shipwrecks and other historic resources, although this potential varies greatly from place to place.

In shallow water and/or where the substrate is rocky, the cable would be laid on the surface for later retroburial by divers and an ROV using water jets. This would minimize the possibility of damage to any previously undetected objects buried in the sediments.

In deeper waters, the sea plow would be used to bury the cable. Instrumentation on the sea plow would increase the operators ability to detect and avoid (go around) buried obstructions.

During installation activities, it is possible that the pre-lay grapnel run or cable installation could potentially damage or destroy a previously unknown shipwreck of potential significance.

5.1.6 Geology, Soils, Faults, Mineral Resources and Paleontologic Resources

Soils

Sediments on the continental shelf off Morro Bay are generally sandy within 5 miles (8 km) of the shore, consistent with recent deposition under turbulent, shallow water conditions. Further offshore, sediments consist of silty clays which are transported farther from shore before settling out of suspension. The proposed cable route does not cross any submarine canyons on the continental shelf off Morro Bay.

The shoreline of San Luis Obispo County is characterized by uplifted sedimentary rocks associated with the continental shelf. The onshore portion of the project is on old, wind blown sand, formed into dunes and stabilized by perennial vegetation. The nearest rock outcrops on the shoreline are approximately 0.5 mile (0.8 km) south of the beach parking area. Rocky shoreline predominates beginning at Islay Creek and continuing southward around Point Buchon. These rock outcrops continue offshore and are associated with kelp beds south of the area crossed by the proposed cables.

The immediate nearshore area surrounding the cable bore exits is characterized by thick deposits of coarse sands, cobbles, and shell fragments which are poorly sorted due to the dynamic surf zone environment, characterized by strong waves and currents. Sedimentary rock outcroppings appear frequently from approximately one to three nm offshore at depths of approximately 100 to 200 feet (30 m to 60 m). Rock outcrops are interspersed with sedimentary deposits of silts and sandy silts.

Faults
The Hosgri Fault Zone extends 70 miles (112 km) from Point Pedernales to San Simeon, trending approximately northwest and remaining offshore for its entire length. It occurs in the area crossed by the proposed cable routes at five to seven nm (9 to 13 km) offshore. This complex fault contains right-lateral slip, thrust and reverse components. The last known rupture occurred on November 4, 1927, and measured 7.3 on the Richter Scale. A recent extensive study of the Hosgri Fault Zone by PG&E concluded a maximum magnitude distribution for the zone of 7.0. The most recent surface rupture along the Hosgri Fault Zone is estimated within the last 8,000 years. The Hosgri Fault Zone is active and could produce displacement, although the slip rate and rupture interval are unknown.

Another local fault, the Los Osos, exists to the east of the Hosgri Fault Zone, and intersects in Morro Bay. From there, the fault zone continues south about 23 miles (37 km). The Los Osos Fault Zone contains discontinuous, sub-parallel and *en echelon* fault segments, exhibiting primarily reverse displacement. The PG&E survey of the area assigned a maximum credible earthquake magnitude of 6.8 to the Los Osos Fault (Woodward-Clyde 1998).

Mineral Resources
There are no active or inactive offshore oil and gas leases in the areas crossed by the project. The nearest leases (inactive) are in the Lion Rock Unit in the northern Santa Maria Basin, south of the cable routes and approximately 10 nm (18 km) due south of Point Buchon. No production or exploration has occurred in these areas in recent years.

Paleontological Resources
Paleontological resources are fossilized evidence of past life found in the geologic record. Despite the prodigious volume of sedimentary rock deposits preserved worldwide and the enormous number of organisms that have lived through time, preservation of plant or animal remains as fossils is an extremely rare occurrence. Because of the infrequency of fossil preservation, fossils (particularly vertebrate fossils) are considered to be nonrenewable resources. Because of their rarity and the scientific information they can provide, fossils are highly significant records of ancient life. As such, paleontological resources may be considered "historically significant" in the scientific annals of California under CEQA Guidelines Section 15064.5(3).

Potential impacts caused by the Project exist within the nearshore area to about six miles (10 km) offshore and/or to depths of about 300 feet (100 m). The potential impacts entail minor disturbance of sediments due to the initial jetting away of sediment to expose the bore pipes, and subsequent jetting by divers and ROV to retro bury the cable. These operations entail a very localized displacement of sediment along the seafloor. Cable burial in this manner does not require a trench, because the weight of the cable causes it to sink into the underlying sediments when they are loosened by the action of the water jet.

The cables would be direct-laid over rock outcrops, and no alteration of these features is anticipated, although the weight and motion of the cable could result in grooving on the surface of soft sedimentary rocks.

5.1.8 Hydrology and Water Quality

Oceanographic nearshore conditions are dynamic, characterized by strong winds, associated waves, and surface currents, particularly during winter and spring. Farther offshore to the edge of the continental shelf, the California Current system predominates. This system is composed of a generally offshore, southward flowing current at the surface, a deep water undercurrent which flows northward and sometimes surfaces during fall and winter, and the inshore Davidson current, which flows northward during October to April.

Water quality in the waters over the continental shelf that would be crossed by the cables is generally good, as the marine waters are thoroughly mixed as a result of upwelling, waves and currents, and there are few and relatively small and/or distant potential sources of pollutants. The nearest municipal outfall, serving Morro Bay and Cayucos, is off Cayucos about six miles (10 km) to the north.

Sediments dredged from Morro Bay are occasionally deposited off of the sand spit just south of the harbor entrance. Inputs of terrestrial sediments from local creeks, the largest of which (Los Osos Creek and Chorro Creek) discharge into the sheltered waters of Morro Bay, occur primarily during brief periods of heavy runoff associated with winter storms. Incidental releases of small quantities of waste likely occur from recreational and commercial vessels.

5.1.9 Land Use and Recreation

The environmental setting for potential impacts on land use and related recreational activity is limited to the Sandspit Parking Lot, which is a public parking lot one mile (1.6 km) off of Pecho Valley Road, along Sandspit Road, in Montaña de Oro State Park. The parking lot contains 50 parking spaces, telephone, tables, and restrooms, and is at the head of a trail to Sandspit Beach. Recent estimates are that approximately 50 percent of the parking spaces are occupied at any one time, and that 600 persons per day use the parking lot, during peak summer months.

The applicant is proposing to coordinate all activities on land with the State Parks Department, and activities on the water would be coordinated with the United States Coast Guard (USCG).

The project could temporarily affect recreational activities at the Sandspit Park Lot. Cable installation activities in the parking lot could impact recreational activities by limiting parking spaces or beach access.

5.1.10 Marine Transportation

Shipping activity along the central California coast includes all types of vessels: tankers, container ships, bulk carriers, military vessels, research vessels, cruise ships, tugs and tows, registered fishing vessels, and other types of commercial vessels.

A wide variety of vessels traverse the proposed project area. The majority of them are fishing and recreational vessels that operate out of Morro Bay and to a lesser extent, Port San Luis. Morro Bay is a popular recreational boating area. The greatest concentration of boating activity is near the mouth of Morro Bay about five miles (eight km) north of the cable landing at Montaña de Oro State Park. Port San Luis is about 18 miles (30 km) southeast of the cable landing.

The applicant is proposing measures that would provide sufficient notice to other vessels to enable them to maintain a safe distance, in order to avoid navigational delays or unsafe situations.

During cable installation activities, the vessel would fly the appropriate brightly colored flags that vessels use to communicate with each other, identifying it as a cable-laying vessel and therefore, as a “vessel restricted in her ability to maneuver.” While operating at night the vessel would be well lighted and display the recognized light signal indicating that it is a vessel laying cable.

Ongoing cable maintenance would not be required and any cable repair events would be of short duration. Other vessels would be required to maintain a minimum distance of one nm from the cable-laying vessel during repair events, thereby avoiding navigational delays or unsafe situations. Any required cable removal at the end of the system life, would be subject to the same navigational constraints and durations.

5.1.11 Noise

No ambient noise measurements are available, but natural background noise is generally high due to the frequent strong winds and surf. No noise sensitive receptors are located in the vicinity of the onshore site, except Montaña de Oro State Park.

The nearshore cable laying activities would produce noise that may be similar to noise generated by other vessels of similar size. The noise impact in the nearshore area would be intermittent over a period of one to two months with vessels operating at varying distances from shore, but never closer than one-half mile. With the required one nm standoff area from the cable laying vessels, project noise is not anticipated to approach the 70-decibel level (maximum daytime sound level of 70 decibels at outdoor recreation sites, San Luis Obispo County Noise Element)

At the Sandspit Parking Lot, noise-generating activities would occur during the bore pipe cleaning and cable pulling operations. Assuming typical diesel engines would be operating at these times, they could produce noise levels approaching 95 decibels at a distance of ten feet. Noise levels decrease 6 decibels with each doubling of distance from the noise source. The anticipated noise levels would be below the 70-decibel level criteria at a distance of approximately 200 feet.

5.1.12 Socioeconomics (Population and Housing; Public Services; Utilities and Service Systems)

Potential socioeconomic impacts associated with the proposed AT&T project could result from possible interruption and/or disruption of commercial fishing activities. To the degree that commercial fishing operations might be hampered, there could be reductions in net revenues accruing to commercial fishers which, in turn, could have effects on local employment and the fiscal well-being of public harbor operations as well as related businesses.

At this time it does not appear that the project would affect other governmental services, such as fire, police protection, schools, and roads. The project would not require new utilities or service systems and would not increase demands on existing public services. No impacts on power, natural gas, communications systems, water, sewer, storm drainage, or solid waste are anticipated at this time.

5.1.13 System Safety/Risk or Upset

This section would address the potential impact of upsets (accidents or collisions) that could result in spillage of hazardous material (e.g., fuel, oil, or other petroleum product) at sea or on land.

The international rules and regulations governing operations at sea were formalized in the Convention on the International Regulations for Preventing Collisions at Sea in 1972 and became effective on July 15, 1977. Congress adopted these rules and regulations as the International Navigational Rules Act of 1977, commonly called 72 COLREGS. These rules, with 1989 amendments, identify all the regulations that govern operations on U.S. navigable waters. The rules are administered and enforced by the USCG.

During cable installation activities there is a risk of spills or upsets from the cable-laying or repair vessels. In the event of a spill that exceeds the vessels clean-up capacity, the vessel would immediately coordinate with the USCG to avoid or minimize the effects.

Conflicts with shipping traffic exists during installation, maintenance and repair events. Notification of cable-laying, cable repair, and landing site construction would be posted in the USCG's Local Notice to Mariners to ensure that mariners on commercial vessels, military vessels and recreational boaters would be advised of the activity.

There is a possibility of a cable failure due to trawling accidents, seismic activity, or sediment flows occurring in areas where cables cross steep submarine topography.

5.1.14 Transportation and Circulation

Project-related traffic would involve the transportation of workers, equipment and construction materials to the installation sites. For a period of one to two weeks of shore-end activities, between 10 and 20 workers associated with the project would travel along Pecho Valley Road, most likely through Los Osos Valley Road, to and from the Sandpit Parking Lot on Sandspit Road. The addition of construction related traffic is anticipated to only have a minor impact at this time.

5.2 Special Impact Areas

5.2.1 Cumulative Impacts

CEQA section 15130, requires an examination of the potential for a Project to have cumulative impacts when considered in conjunction with other Projects proposed and/or approved within a region. The EIR would contain a discussion of cumulative impacts of the proposed project.

5.2.2 Growth-Inducing Impacts

CEQA requires a discussion of the ways in which a proposed Project could be an inducement to growth. The State CEQA Guidelines (section 15126.2(d)) identify a project to be growth-inducing if it fosters or removes obstacles to economic or population growth, provides new employment, extends access or services, taxes existing services, or causes development elsewhere. The EIR would contain a discussion of potential growth-inducing impacts of the proposed Project.

5.2.3 Environmental Justice

The CSLC developed and adopted an Environmental Justice Policy to ensure equity and fairness in its own processes and procedures. This policy stresses equitable treatment of all members of the public and commits to consider environmental justice in its processes, decision-making, and regulatory affairs which is implemented, in part, through identification of, and communication with, relevant populations that could be adversely and disproportionately impacted by CSLC projects or programs, and by ensuring that a range of reasonable alternatives is identified that would minimize or eliminate environmental impacts affecting such populations.

This portion of the EIR would analyze the distributional patterns of high-minority and low-income populations on a regional basis. The analysis would focus on whether the proposed Project's impacts would have the potential to affect area(s) of high-minority population(s) and low-income communities disproportionately, thereby creating an adverse environmental justice impact.